

**FEATURES**

- Ultra high optical output
- Four wire bonds on die corners
- Very uniform optical beam
- Standard 3-lead TO-39 hermetic package
- Chip size: 0.026 x 0.026

All surfaces are gold plated. Dimensions are nominal values in inches unless otherwise specified. Two Anode pins **must be** externally connected together.



**ELECTRO-OPTICAL CHARACTERISTICS AT 25°C**

| PARAMETERS                                | TEST CONDITIONS        | MIN | TYP | MAX | UNITS |
|---|------------------------|-----|-----|-----|-------|
| Total Power Output, P <sub>O</sub>        | I <sub>F</sub> = 500mA | 80  | 140 |     | mW    |
| Peak Emission Wavelength, λ <sub>p</sub>  | I <sub>F</sub> = 50mA  |     | 850 |     | nm    |
| Spectral Bandwidth at 50%, Δλ             | I <sub>F</sub> = 50mA  |     | 40  |     | nm    |
| Half Intensity Beam Angle, θ              | I <sub>F</sub> = 50mA  |     | 110 |     | Deg   |
| Forward Voltage, V <sub>F</sub>           | I <sub>F</sub> = 500mA |     | 1.7 | 2   | Volts |
| Reverse Breakdown Voltage, V <sub>R</sub> | I <sub>R</sub> = 10μA  | 5   | 30  |     | Volts |
| Rise Time                                 | I <sub>FP</sub> = 50mA |     | 20  |     | nsec  |
| Fall Time                                 | I <sub>FP</sub> = 50mA |     | 20  |     | nsec  |

**ABSOLUTE MAXIMUM RATINGS AT 25°C CASE**

|  |        |
|--|--------|
| Power Dissipation <sup>1</sup>                         | 1000mW |
| Continuous Forward Current                             | 500mA  |
| Peak Forward Current (10μs, 200Hz) <sup>2</sup>        | 1.5A   |
| Reverse Voltage  | 5V     |
| Lead Soldering Temperature (1/16" from case for 10sec) | 260°C  |

<sup>1</sup>Derate per Thermal Derating Curve above 25°C

<sup>2</sup>Derate linearly above 25°C

**THERMAL PARAMETERS**

|  |                 |
|--|-----------------|
| Storage and Operating Temperature Range            | -40°C to 100°C  |
| Maximum Junction Temperature                       | 100°C           |
| Thermal Resistance, R <sub>THJA</sub> <sup>1</sup> | 145°C/W Typical |
| Thermal Resistance, R <sub>THJA</sub> <sup>2</sup> | 75°C/W Typical  |

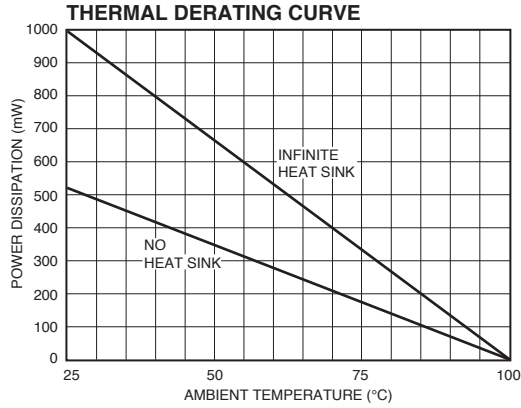
<sup>1</sup>Heat transfer minimized by measuring in still air with minimum heat conducting through leads

<sup>2</sup>Air circulating at a rapid rate to keep case temperature at 25°C



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MAXIMUM RATINGS



TYPICAL CHARACTERISTICS

